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Demonstration in the teaching  
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of Geography.



A DEMONSTRATION IN THE  
TEACHING OF GEOGRAPHY



# A DEMONSTRATION IN THE TEACHING OF GEOGRAPHY

AN ACCOUNT OF THE  
STAFFORDSHIRE GEOGRAPHICAL  
EXHIBITION

EDITED BY  
JASPER H. STEMBRIDGE

Author of the  
*World-Wide Geographies,*  
*Germany: A Study in Physical and Human Geography, etc.*



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## FOREWORD

. By F. A. HUGHES, M.A.

Director of Education for Staffordshire.

A BOUT twelve months ago it was decided to hold an exhibition in Stafford which would serve as a demonstration in various aspects of geographical teaching on modern lines. The exhibition was originally planned upon quite a modest scale, and it was to be held in the summer of 1933 at the County Technical College at Stafford. As time advanced it was evident that a demonstration was possible on a much larger scale than had originally been intended, and the development, planning and carrying into operation of the scheme was an outstanding and heartening example of what can be accomplished by full and selfless co-operation. To the teachers and children who provided the material the credit for the success of the exhibition is largely due, but this success could not have been achieved without the aid unstintingly given to the local authority by the officers of the Board of Education, and especially by Mr. Jasper Stembridge, who was chiefly responsible for the organization. In the exhibition itself was displayed the work both of teachers and pupils; the aim was the pooling of ideas; and the underlying principle guiding the teachers was the need to use scientific geography as a subject of intense interest to pupils, and as an explanation of man's relation to his environment.

All types of educational institutions were represented; the infant schools, junior schools, senior schools, secondary schools, technical colleges, Home Office schools and the University.

It is fair to claim that the exhibition was an outstanding success, as was indicated by the appreciation not only of leading educationists from all over the country, but also by the thoughtful and critical examination of the exhibits by members of the general and non-professional public, who attended in large numbers.

The exhibition was opened by Mr. E. G. Savage, His Majesty's Senior Chief Inspector of Schools, and on succeeding days lectures were given by Sir Francis Goodenough and Professor Roxby. It was generally felt by geographers that some permanent record of the work should be made in the interests of educational progress, and though it has only been possible to preserve a limited number of the exhibits, this vivid description of the exhibition has been written, both to enable those who were visitors to renew their study of the exhibits, and also to enable those who were not present to examine from a somewhat unusual aspect the value and possibilities of geography as a subject in the curriculum of schools of all kinds. The exhibition was in itself an inspiring success, but its value will be enhanced tenfold if this booklet should lead to further progress and development in geography teaching and to the institution elsewhere of similar demonstrations of the importance and value, both vocationally and culturally, of the subject of geography.

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## CHAPTER I

### THE EXHIBITION AND ITS AIMS

THE Staffordshire Geographical Exhibition was held at the Technical College, Stafford, from the 13th to the 19th of July, 1933. It was arranged by the Local Education Authority in conjunction with His Majesty's Inspectors, and was designed to show the progress made in Geographical teaching in Staffordshire in recent years.

There must always be some anxiety before the event in the case of such an ambitious enterprise as this, for Staffordshire was aiming high, and the Exhibition was probably the largest, the widest in scope, and the most comprehensive that has ever been devoted to the presentation of a single educational subject in this country.

The appeal was to those interested in Geography. Would they come to Stafford in sufficient numbers to justify the time spent on the preparation and staging of the Exhibition? It was evident from the attendance at the opening ceremony that they would, but the number of people who visited the Exhibition on the first day gave no indication of the interest that had been aroused.

It is sometimes said that the popular Press and the general public are not deeply interested in education apart from the financial side. The Staffordshire Geographical Exhibition proved that this supposition is entirely wrong. The accounts in the daily papers and the leading educational journals, as well as descriptions given by visitors, stimulated the interest not only of educationists, but also of the man in the street. On

the second day the Exhibition was thronged ; on the third and subsequent days it was so crowded in the afternoons and evenings that it was often difficult to make one's way round the rooms.

Large numbers of specialist teachers took advantage of the quieter hours of the early morning, and from ten o'clock onwards groups and individuals were seen examining the various exhibits, taking notes, and discussing the merits and faults of the work displayed.

A large proportion of the visitors consisted of teachers, but the promoters were as much surprised as gratified to find that the Exhibition had attractions for many of the general public. It was interesting to study the visitors. Some were evidently paying a cursory visit, but others were full of purposeful activity. Here was a man spending—as many did—the greater part of the day at the Exhibition. He was taking copious notes and was intent on gathering all possible information. He looked like the head-master of a progressive school : actually he was connected with an educational journal, and he was gathering a valuable store of Geographical material for future articles. An alert-looking man spent a considerable time studying the boot exhibit in the Staffordshire Industries section : he examined the boots and shoes with critical eye, but seemed equally interested in maps showing the relation of the physical features and climate to the cattle-rearing areas from which many hides would ultimately find their way to Staffordshire boot factories. Was he a schoolmaster ? No, he proved to be a manufacturer. That distinguished-looking man talking to a well-known head-master was a representative of the Home Office ; and the man who was so closely studying an exhibit illustrating the relation of the geology to the flora in a Staffordshire district was not a botanist or geologist, but a business man. It was difficult to place two

charmingly dressed ladies who spent so much time in the junior room, but on enquiry one found they were officials in the Board of Education. Here was a well-known publisher, and there a medical man: the former looked like a country squire, the latter like a commercial magnate. An oldish man who was obviously deeply interested appeared to be a schoolmaster, but turned out to be the foreman of a large works.

It had originally been intended to close the Exhibition after three days, but owing to requests received from all parts of the country, it was decided to keep it open for three additional days.

Owing to the need for economy, the Exhibition had been little advertised, and the thanks of educationists are due to the Press, and to Sir Francis Goodenough, who, in a letter to *The Times*, drew attention to what he described as a "remarkable and valuable Exhibition." "It is," wrote Sir Francis, "an Exhibition of modern methods of teaching Geography as practised in every type of educational institution in the county, from the infant school to the university (of Birmingham). The Exhibition is the product of unusually complete team work in which teachers, the Local Education Authority, the Board of Education and the employers in the county, as well as educationists and industrialists all over the world, have co-operated; and is so complete, thorough and fascinating that it ought to be seen by as many people as possible in the short time it can remain open. Geography, taught as a humanistic science, as a complete study of 'the home of mankind' . . . is of such fundamental importance to this great mercantile nation, as well as of such primary importance in the general cultural education of its people, that this demonstration of progress in its teaching deserves the widest publicity and recognition."

### THE OPENING CEREMONIES

The opening ceremony was performed on the first day by Mr. Savage, now the Senior Chief Inspector of the Board of Education, in the absence through illness of Sir Henry Richards, the then Senior Chief Inspector.

"There is no possible doubt to-day as to the importance of Geography as a subject of the school curriculum," said Mr. Savage in his opening remarks, and these words were the keynote of his stimulating address.<sup>1</sup>

On the second day Sir Francis Goodenough delivered an address on "The Teaching of Geography as a Cultural Course of Commercial Value." Professor Roxby, the President of the Geographical Association, on the third day gave a remarkable talk on China—that ancient land now awakening from its long sleep.

### THE AIMS OF THE EXHIBITION

To what was the success of the Exhibition due? In what lay its appeal?

The organisers aimed (as indicated in Sir Francis Goodenough's letter to *The Times*) at displaying the work of both teachers and pupils, and at pooling ideas so that freshness of outlook might be obtained. No special aspect of Geography was stressed, but the underlying principle guiding nearly all was the need to use scientific Geography as an explanation of man's relation to his environment, and to show how the subject might be made interesting to the pupils. Nearly all the exhibits, whether from primary, secondary and public schools, the Werrington Home Office School, the training college (Dudley) or the university, exemplified this idea; and the keynote of them all was the need of combining the physical and human sides of

<sup>1</sup> See Appendix.

*Geography into one single study—the study of human relationships.*

Should Geography be an unpleasing blend of Mathematics and Statistics? Should Physical Geography and simple geological facts be ignored, as unfortunately they sometimes still are by a few rigid geographers of the older school? We think not. The *New Geography*, as shown at this Exhibition, made it evident that these ideas are not only unsound, but out of date. The work displayed showed, in nearly every case, how the geographer can use the relevant facts of Mathematics and Geology, and how, by combining them with the broad facts of relief, climate, vegetation and the distribution of minerals, he can achieve his ultimate aim—that of presenting a vivid picture of the earth as the home of man.

It was this belief that animated the exhibitors and organizers of the Stafford Geographical Exhibition. That their belief was justified no unbiased visitor to the Exhibition would deny. Here was the *New Geography*—pulsating with life—presented with a freshness of outlook, but with a deep conviction of the importance of the subject and its underlying principles.

To quote the article in the *Birmingham Post*, “Even the speculations of Aristotle, or Strabo’s pioneer work in political Geography, had in them more human interest than the array of place-names and products,” statistics and Mathematics, that the children of a quarter of a century ago were expected to master. Those days, as the work at this Exhibition showed, are gone for good; the day of the one-compartment geographer is over; all branches of the subject are welded together in a single whole; Geography has been made an adventure, but an adventure all the more fascinating because it is based on intelligent study.

## CHAPTER II

### THE EXHIBITS

NEVER before had there been brought together under one roof in Staffordshire so wide a variety of geographical exhibits ; for never before had so many educational institutions pooled their resources. Some two hundred schools had sent their best work, but this work had not been, for the most part, specially prepared for the Exhibition ; it consisted rather of samples of work done during the last three years. Here and there gaps had been filled in to complete the picture, but in the main the exhibits showed the everyday work done by tutors and students, teachers and children.

On approaching the Main Hall, visitors ascended a staircase on which was displayed part of a collection of posters arranged to show the use that could be made of them in teaching Geography. They were well arranged, and to many of them were attached questions designed to bring out points of geographical interest. The world had been searched for these and other posters that were shown in the corridors throughout the buildings. We have become accustomed to the delightful posters shown on our railway stations and those displayed until recently by the Empire Marketing Board. The fine collection of British posters was equalled by those from France, Italy, Spain, Austria, Belgium and Hungary. Those from Norway recalled the delights of a trip up the fiords ; those from Russia made one wish to journey down the Volga or visit

Moscow; Czechoslovakia showed her National costumes, while the German posters were remarkable for their pictorial maps. The Indian posters had all the glamour of the East, and those from Japan illustrated her industries as well as the many attractions she has to offer the tourist. South Africa called attention to her blue skies, brilliant sunshine, orange groves and vineyards; Australia and New Zealand told with pride of their industries; and the posters from Canada and the United States were not only "colorful"—to use an American word—but magnificent examples of the designer's art.

At the entrance to the hall was a series of models illustrating a journey across Canada by the Canadian Pacific Railway; and beyond was a collection of models, maps, diagrams and survey work done by boys of the Werrington Home Office School in connection with their annual camps.

On entering the *Main Hall* itself one felt that here indeed was something to interest everybody. One side of the hall was entirely devoted to Staffordshire Industries: their importance was demonstrated by maps showing the location of raw materials and the world-wide distribution of Staffordshire products; graphs showing numbers employed; pictures and diagrams; and specimens of an enormous variety of goods lent by manufacturers. And what a variety was here! Pottery, of course; delicate glass; locks, nuts and bolts; steel chairs and tables; specimens of hollow ware; boots and shoes, and beautiful examples of the silk industry. The whole Exhibition was an example of co-operation, and this section showed how great had been the co-operation between industrialists and teachers. On a raised platform at the further end of the hall, a section dealing with World Products was illustrated by maps, pictures, diagrams and specimens of goods, and by a delightful

set of models showing life—and its products—in regions ranging from the Frigid Zone to the Equator. Below the platform was an exhibit that drew admiring comments from women teachers and women in general. It consisted of a set of figures dressed in National Costumes, each figure shown in its appropriate setting. The workmanship was of high quality, and this exhibit was a pleasing example of co-operative effort between different departments in two Senior Schools. The rest of the hall was devoted to a variety of work designed to show the general scope of the Exhibition. Among the many exhibits were those showing British Empire Products in which the products (many of which had been obtained from the Imperial Institute) were linked by streamers with their place of origin; a series of note-books—a geographical ladder—ranging from the infant school to the university; maps illustrating rural industries, including an interesting map showing milk production in England and Wales, from which one learnt that Staffordshire ranked as the second milk-producing county; models of docks and ships; maps showing British imports and exports; and a clever piece of apparatus designed to facilitate the teaching of contours.

Adjoining the main hall was a room set aside for exhibiting work done in *Secondary Schools and Higher Educational Institutions*. An ingenious piece of apparatus illustrated the movement of the wind belts, and other exhibits included world climatic and vegetation maps, survey work of all types, some excellent geological collections, and many note-books and portfolios. One exhibit consisted of a set of photos sent by a leading Secondary School in the West Indies, and in another a panorama of part of an industrial town (as seen from the Geography room windows) was associated with the ordnance map. The more advanced sections in this room included Regional

Surveys, while exhibits from the North Staffordshire Technical College, Dudley Training College and Birmingham University indicated the results of more mature study in the analysis of geographical regions. Among the latter exhibits was a striking geological relief model of the Lickey Hill area, sent by Birmingham University.

In the room devoted to *Preparatory School* work were collections of pictures and note-books, some really good weather charts planned on the most modern lines, and an interesting pictorial exhibit entitled "The World We Live In."

Outside the room in which the work of junior schools was shown was a senior school project on Japan. A well-constructed relief map of Japan was set in a large tray of water in which were steamers bound for various Pacific ports: the position of the latter was indicated, and the time of the various voyages was stated. In addition, there were many models from Japan showing aspects of life in that country.

The *Junior and Infant Section* contained a wealth of models, pictures and drawings, in most cases the joint work of teachers and pupils. One striking series of models illustrated life in the main climatic belts. All kinds of materials had been used: most of the figures were made of plasticine and dressed in clothes made from oddments. The skilful colour schemes used for the backgrounds and the general grouping of the figures made these models one of the outstanding features of the room. Another well-designed set showed what effective use could be made of card-board and paper, though the materials used were not restricted to these. In front of another tableau, a life-size figure of an Eskimo clad in furs drew attention to a charming scene: the igloo, kayaks, umiaks (communal boats), and figures which had been made

by natives attracted much attention. A project based on the Geography of Japan contained a wealth of material excellently organized. The project, which had been specially amplified for the exhibition, showed the possibilities of this type of work.

Plans and models of school buildings, and maps and models of villages were grouped in another part of the room. Other features were friezes illustrating "Peoples and Homes of Other Lands"; plywood "cut-outs" of animals typical of different regions; and a junior conception of the development of transport. Simple village surveys, weather records, "play-way" maps, and a delightful series of Log Books showed the advances made in geographical teaching.

The adjoining room—devoted to *Geographical Apparatus and Models*—showed how much can be done at a small cost. Here were simple surveying instruments, models illustrating the seasons and the movement of the tides, and apparatus designed to teach the principles of map projection. Other exhibits included models of land forms and relief models of Staffordshire districts, as well as geological collections and maps. One outstanding feature was a scale model of a Geography Room in one of the newer intermediate schools. Plans and photographs of other geography rooms in the county showed the great progress made in the status of the subject. A large photograph illustrating how a school hall is being used for teaching Geography to slower children was also on view, as well as notes on the method used. Schemes of work, text-books, atlases and geographical literature interested teachers and general visitors. Copies of a list showing sources of supply for lantern slides and films, compiled by a geography master, were in great demand by teachers.

The room devoted to *Household Geography* was a centre of interest, especially to women teachers. Most



MODEL OF SCHOOL AND PLAYGROUNDS

of the exhibits in this room indicated how Geography could be taught to girls by taking the home, and home life as the central theme and developing each. In Staffordshire a number of geography rooms have been specially designed for the use of girls, and much of the material in the household section came from the schools possessing these rooms.

A wide range of work was shown in one of the smaller halls. The work displayed included some good Regional Surveys from various districts; home-made weather instruments and weather records for different parts of the county; and three interesting exhibits dealing with (a) the Development of Transport in the Potteries from 1755, (b) the Development of Transport from the fifteenth century, and (c) World Transport. Another arresting exhibit showed the relation of plant life to geology over a comparatively wide area, and the interest of this exhibit was enhanced by a large collection of typical plants obtained from the area. Those whose bent was towards Human Geography found much to interest them in a carefully planned display that depicted the effect of the physical features, geological formations and climate on the plant and animal life and the occupations of the people living in a rural district. Another exhibit consisted of well-drawn maps illustrating the development of Stafford and the importance of its site.

One room was devoted mainly to *Local Geography and History* in rural areas. Teachers in country schools, and those interested in the country-side, found the work shown in this room a fascinating study. A wide range was covered here, but the thoughtful visitor was not long in discovering that, in spite of their diversity, all the exhibits had been designed so as to bring out the underlying principles of modern Geography. In all cases the study of the home region was linked with the larger study of the world.

Thus a local fruit-farming industry was associated with the great fruit-producing areas; the gradual development of a forest region from 1800 provided the central theme for a study of world forests; traffic on the Shropshire Union Canal formed the basis of work connected with the canal system of the British Isles and water transport in general. A model of Tutbury Castle, together with note-books and maps, reminded one of the historic interest of that once important town.

A careful analysis (supplemented by maps, diagrams and pictures) showed the use made of Broadcast lessons in a number of schools and also made it clear that adequate preparation and "following up" is essential to the successful use of this type of lesson. Another exhibit indicated the use that can be made of newspapers as aids to geographical teaching, and the hints given by teachers who had studied this method of supplementing good text-books proved valuable to many of their colleagues.

The exhibit of the *Geographical Association* included a wide range of well-chosen books. Many visitors were surprised at the variety of geographical publications and the vast strides made in production and finish in recent years.

## LIST OF EXHIBITS

*It is impossible in a booklet of this size to give a complete list of the exhibits, but the following indicate some of the principal ones. The publishers will be pleased to lend a copy of the full list to organizers of Geographical Exhibitions.*

### STAIRCASES AND CORRIDORS

Pictures and Posters.

School Camps and Journeys.

Project on Japan.

Model illustrating a Journey across Canada.

### THE MAIN HALL

Staffordshire Industries. (Heavy industries, lock, engineering, nuts and bolts, hollow ware, anchors and chains, glass, boots, pottery, silk, coal.)

Rural Occupations of Staffordshire.

World Products.

British Empire Products.

National Costumes.

British Imports and Exports.

Miscellaneous. (Docks, ships, series of world maps showing physical features, climate, vegetation, communications, etc.; contour model, note-books from infant school to university, junior, senior, secondary note-books; time indicators, length of day and night.)

Poster Lessons.

### SECONDARY AND HIGHER EDUCATION

Local Industries.

Movements of Wind Belts.

Geological Collections.

Study of Isle of Wight.

Industries of the Bahamas sent by a West Indian Secondary School.

World Maps.

Survey Maps.

Regional Surveys.

Geological Model of Lickey Hills.

Relief Models.

PREPARATORY SCHOOLS

Weather Records.

The World We Live In. (Pictorial record.)

Round the World.

Relief Map of Tamworth.

Note-books and Portfolios.

INFANTS AND JUNIOR SCHOOLS

Models illustrating Life in Other Lands.

Travel Project.

Model of Village.

Products of Staffordshire.

Contour Map of England and Wales. (Plug-in type.)

Comparative Set of Maps (in ply-wood) of England and Wales.

Frieze of Children of Many Lands.

Peoples and Homes of Other Lands.

Weather Calendars.

Exploring the British Isles. (Frieze.)

World Industries. (Frieze.)

Animals of the World. (Frieze.)

Japan: a junior school project amplified to complete a comprehensive project in junior work.

Weather Records.

Children of Other Lands. (Model.)

Life in the Jungle Model.

Model made by Eskimos.

Note-books.

Animals of the World. (Models.)

GEOGRAPHICAL APPARATUS AND MODELS, SCHEMES, ETC.

Lists giving information about lantern slides and films.

Schemes of Work.

## 26 THE TEACHING OF GEOGRAPHY

Model of a Geography Room.  
Plans and Photos of Geography Rooms.  
Home-made Geographical Apparatus.  
Relief Map of Staffordshire Village.  
Land Forms. (Models.)  
Geological and Relief Maps.  
Staffordshire Industries. (Map.)

### HOUSEHOLD GEOGRAPHY

Food and Beverages.  
Cereals.  
Geography of Kitchen, Sitting Room and Bedroom.  
Fuel.

### GENERAL EXHIBITS. (HALL NUMBER 4.)

Stafford and the Position of its County Town.  
Weather Apparatus and Records.  
Development of (a) World Transport, (b) Local Transport,  
(c) Modes of World Transport.  
Regional Surveys.  
Relation of Plant Life and Geology.  
Effect of Environment on Human Occupations in a Rural  
Area.

### LOCAL GEOGRAPHY AND HISTORY

A Study of the Trent Basin.  
Local Fruit Industry with Extensions to World Studies.  
How our Town has Changed.  
Needwood Forest with Extensions to World Studies.  
The Shropshire Union Canal—types of goods carried—with  
extensions to the British Canal System.  
Trent at King's Bromley.  
Model of Tutbury Castle, note-books and maps.

### BROADCAST LESSONS, NEWSPAPER GEOGRAPHY

Broadcast to Schools: a term's work.  
Newspaper Geography: its uses as an aid to Geography  
Teaching.  
Geographical Association Stall.

## CHAPTER III

### THE FASCINATION OF GEOGRAPHY

In this chapter some of the exhibits are briefly described, with short notes about their preparation, and some account of their educational value. Those dealt with here have been selected because of their variety, for to do justice to the Exhibition each exhibit should be described in full. At the request of Staffordshire teachers, no school and no teacher's name has been mentioned, for all worked as a team for the common good. In some cases the work was done by country schools, in others by those in urban areas, and in many it was the co-operative work of a number of schools. In some of these schools the work was the joint effort of teachers and pupils, in others the former simply guided the latter.

One of the chief aims of the Exhibition was to exchange ideas, and Staffordshire teachers hope that the ideas put forward here may prove helpful to their colleagues in all types of schools. Lack of time and local circumstances alone would prevent any one school from undertaking more than a portion of the work outlined in this chapter. In most cases it would prove necessary to modify it in some way, but once an idea is started it usually develops on its own lines, and often in a rather different way from that originally planned.

In all schools the work was carefully planned beforehand, though it was modified, where necessary, as it gradually took shape; in no case was it hurried; and in all cases it meant hard work. But this hard work on the part of both teachers and children was well

worth while, for in addition to its educational value in the narrow sense of the term, it stimulated interest among many types of people. Employers and employed, parents and friends, Press and public, barge owners and bargees, all co-operated to ensure success. And it means no lack of appreciation of their valuable aid, when we say that this co-operation was largely due to the deep interest aroused in this demonstration of the teaching of *The New Geography*.

#### I. THE INFLUENCE OF THE PHYSICAL RELIEF, GEOLOGY AND CLIMATE ON PLANT AND ANIMAL LIFE AND HUMAN OCCUPATIONS

The district studied in connection with this exhibit rises steeply, over a distance of some three miles, from Okeover Hall, on the banks of the Dove, to the village of Stanton, situated on the Weaver Hills at a height of some 1200 feet. The central feature of the exhibit was a pictorial diagram showing, in section, the underlying geological formations (New Red Sandstone, Limestone and Millstone Grit) with a drawing of the country-side above.

Large charts, illustrating typical birds and animals, flanked the pictorial map, while a portfolio showing the adaptation of the fauna to particular formations accompanied these charts. Pressed and mounted specimens of typical plants associated with each area were contained in folders. The adaptation of the plants, as shown in their leaves and manner of growth, indicated clearly their struggles with scarcity of water on the limestone and with conditions of virtual drought on the gritstone. The more favourable conditions of the new red sandstone area, with its more abundant water supply, were reflected in the large leaves of its flora. The human conditions were illustrated by photographs that clearly showed the occupations and types of buildings in the three areas.

In the new red sandstone forest trees were abundant; hedges formed the boundaries of fields covered with rich grass; while the churches and the houses (including Okeover Hall), were chiefly built of sandstone. The deep red fertile soil, formed by weathering, and the ability of this soil to retain moisture, were well shown.

The bleak nature of the limestone uplands was made apparent. In this district stone walls were replaced by hedges as field-boundaries; trees—chiefly stunted ash—were few, and paved ponds served to retain moisture for stock.

The gritstone moors, at a height of 1000 to over 1200 feet, were shown to be covered with poor pasture, and with patches of swampy ground on the lower slopes and in the hollows. The higher slopes were heather-clad and devoid of trees, while the large moorland fields were enclosed by black gritstone walls. [The barrenness of the area, thus depicted, is due partly to the acidity of the peaty soil, and partly to the wind-swept situation.]

## 2. THE EFFECT OF GEOLOGY ON PLANT LIFE

In a large rural school somewhat more specialized work was carried out on similar lines to those described in the previous section. In this case the immediate aim was limited to showing the effect of the soils on the plant life over a fairly wide area. A careful enlargement of the geological map was first made, and various definite points were visited to test the accuracy of the enlargement. The biological society next paid visits to different districts and studied the plant associations of the various geological formations. When a child found a fresh plant he plotted its position on a rough map, and on returning to school all the facts thus obtained were recorded on one large map.

This large map, which was shown at the Exhibition,

# FLORA & GEOLOGY

## NOTE.

BIGELOW'S  
FLORAL  
REGISTRATION  
BANTER

—  
LIMESTONE  
ASSOCIATION  
CLIMATE  
WETTER  
ON GRAINS, ONCE  
KOMELSON, A.B.P.

—  
KEY

LIMESTONE  
ASSOCIATION  
CLIMATE  
WETTER  
ON GRAINS, ONCE  
KOMELSON, A.B.P.

—  
KEY

LIMESTONE  
ASSOCIATION  
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—  
KEY

LIMESTONE  
ASSOCIATION  
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ON GRAINS, ONCE  
KOMELSON, A.B.P.

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LIMESTONE	KOMELSON
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KOMELSON, A.B.P.	KOMELSON, A.B.P.

showed clearly the birch-heather associations of the bunter sandstone. On the higher ground where the moisture content is low, birch, heather, bracken, bilberry, and gorse were found, together with mountain hair grass and silver hair grass. In certain districts comparatively shallow layers of peat had formed over the bunter sandstone. Here there was an abundance of cotton grass and heather, while in the bog areas dwarf sedges and rushes thrived. The deep and sudden valleys of the bunter districts are formed by the washing away of the pebble beds and softer sandstone, until at last the harder and more impervious rocks are exposed and so denudation is checked. In such deep valleys, the water-side association of large leafed plants, such as the butterbur and marsh marigold, was clearly brought out.

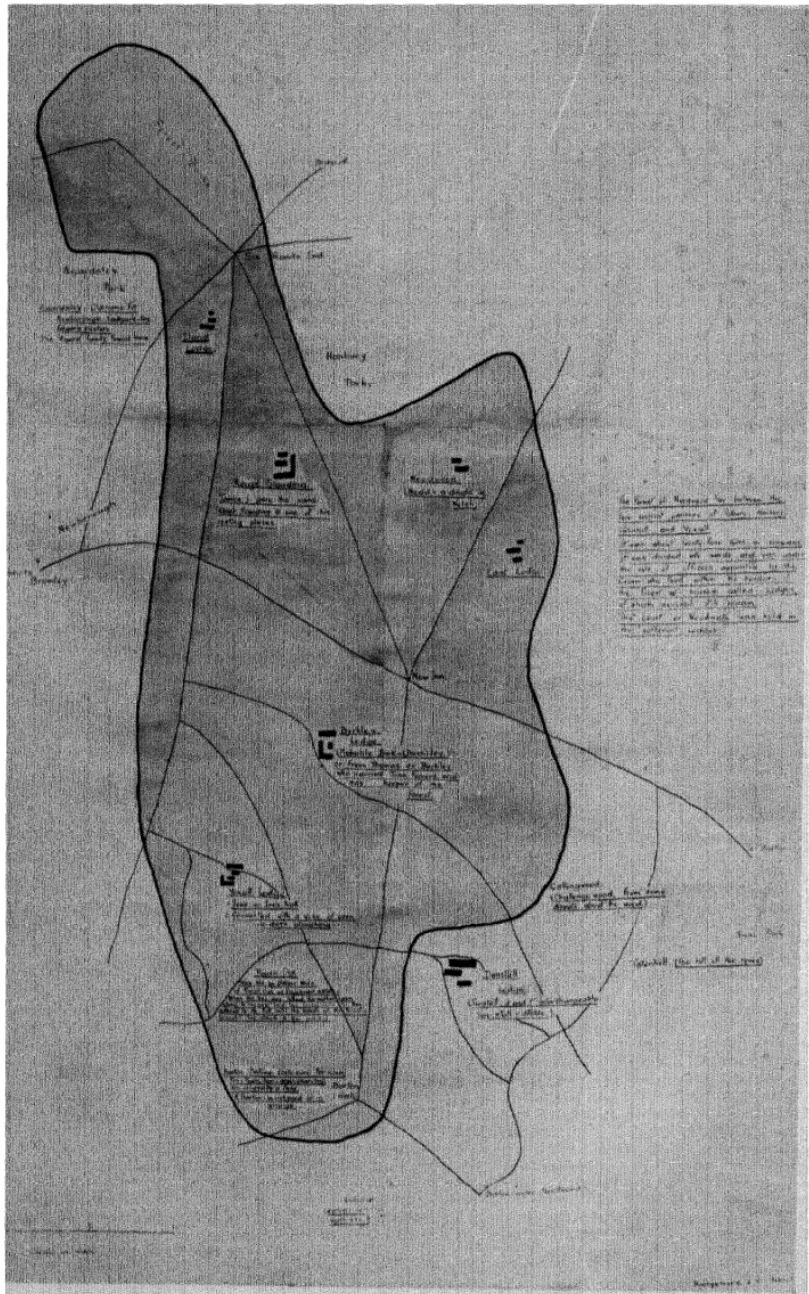
The coal measures showed a great variety of flora: the elder flourished in the hedgerows, and thistles, vetches, coltsfoot were seen to abound on land formed by old "tips" near mines.

The limestone districts were shown to be sparsely wooded. Salad burnet, rest harrow and other legumes were common, while on the keuper, where the water content is higher, the land was often thickly wooded; elders were common and rich and valuable agricultural grasses were found to flourish.

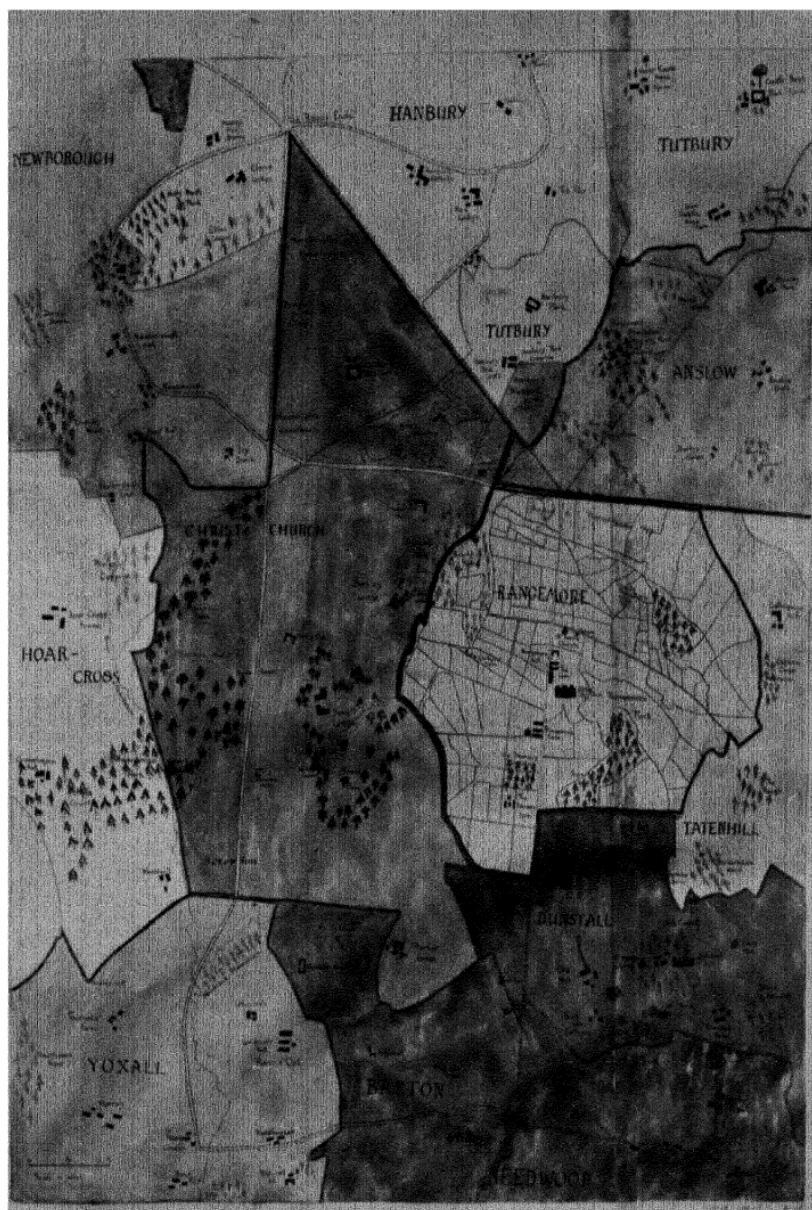
Work such as was done by this school requires patience, for it is most important that the records should be accurate. Given the necessary care the work is not only interesting to children, but trains them in the principle of painstaking and prolonged observation.

### 3. A STUDY OF A FOREST AREA

Another rural school made a study of the woodland area known as Needwood Forest. This district was specially suited for work of this type, for even to-day



### NEEDWOOD FOREST, 1800



NEEDWOOD FOREST, 1933

enough woods, copses and meadowlands dotted with massed and single trees remain to give more than a hint of their once greater extent.

A map of Needwood Forest in 1800 and data relating to the history of the region were first obtained. A survey was then made of the region and a map prepared showing the present extent of the forest. The different types of trees, woodland plants and animals were then studied in the "field," pen-and-ink sketches were made by the children, and photos taken by those who possessed cameras. These sketches and photos, together with notes, were collected together in folios.

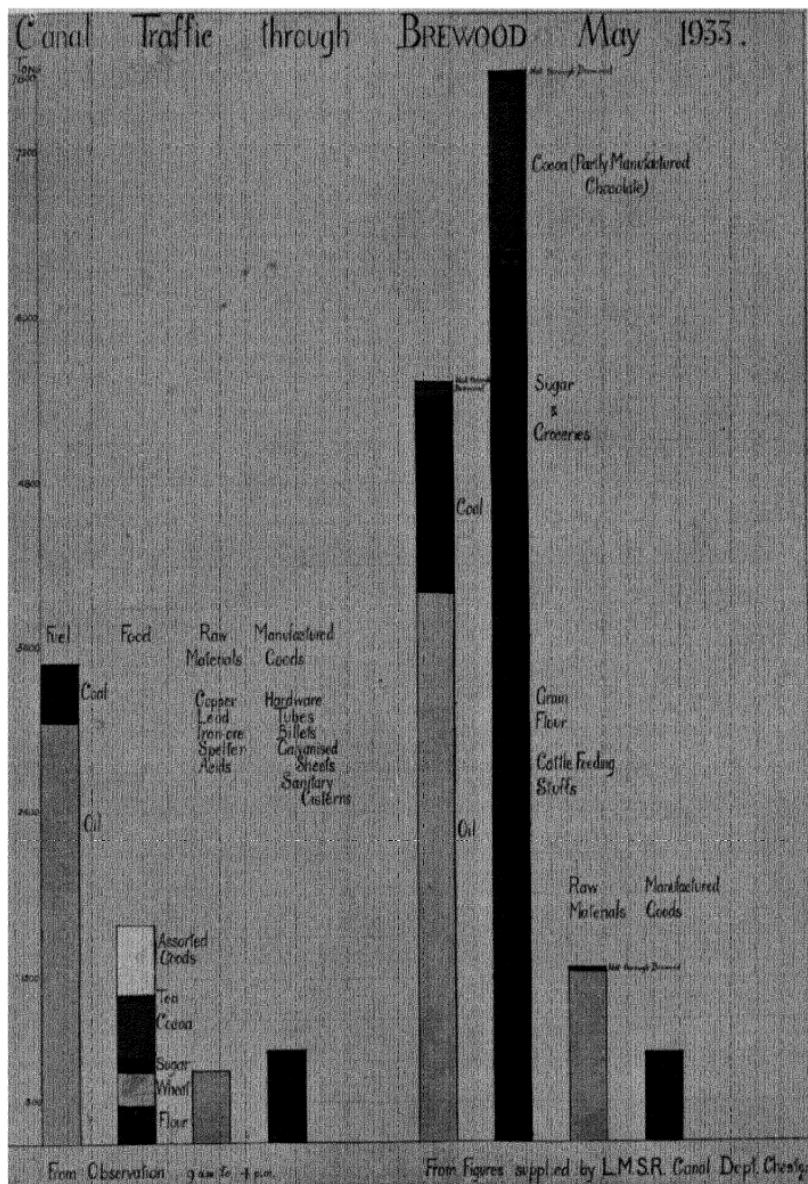
The local forest region was linked with forest areas of the British Isles and the World: maps were drawn showing their respective distributions, and these vegetation maps were associated with their corresponding climatic regions.

#### 4. TRAFFIC ON THE SHROPSHIRE UNION CANAL

One of H.M. Inspectors, when visiting this school, suggested to the Headmaster that in the teaching of Geography use might be made of the fact that the Shropshire Union Canal passed through the village; and that much useful information could be gained from a study of the canal-borne traffic. The Headmaster called a meeting of his staff, and it was decided that a census of the traffic should be taken for one month.

It was felt that a teacher must be present with the children who were to take the census, and so the work was carried out by the older children supervised by a member of the staff which consisted of five teachers and four pupil teachers.

The canal, at its nearest point, is about 200 yards from the school, and at this point there is a bridge



over it, where it passes through the Grammar School grounds. This spot proved a most convenient place for observation. The time covered by the census each day was from 9 a.m. to 4 p.m., including the dinner hour. The work was also carried on during Saturdays. On each day a certain number of pupils were told off to take the census : on Saturdays volunteers were asked for : it says much for the interest aroused that there was never any lack of volunteers for the work.

In the great majority of cases the boat people were both courteous and responsive, and invariably satisfactory replies were given. It was, however, found that few of the bargees had any idea of the ultimate destination or of the origin of the cargoes they carried. Some of them knew that the goods were for export, or had come from some foreign country, but in the main they had no interest beyond the conveyance of the goods to and from Ellesmere Port.

As the census progressed many boats passed a second and a third time, and the observers would be greeted with the remark : "Same again this time, Master," and with a kindly "Good morning." In a few cases, however, the bargees had now taken the trouble to find out both the place of origin and the destination of their cargoes—an interesting example of the co-operative spirit in education.

While this work was being carried on out of school, a study of the canal system and its history was being made in the classroom. It was seen how the Industrial Revolution was the primary cause of the construction of canals, and further how the canals of the Black Country were used at first for local traffic only, but subsequently for traffic to Liverpool (Mersey and Weaver), Bristol (Severn), Hull (Trent), and London (Grand Junction and Thames). This work led to a further study of the great canals of the world, par-

ticularly the Suez and Panama Canals. The first year senior class, whose "special region" was North and South America, learned all they could about the Panama Canal; the second year pupils who were studying Africa, Asia and Australia made the Suez Canal their special study.

The goods carried by the local canal formed the subjects for discussions on World Products. Maps, diagrams, and notes were prepared, pictures were collected and models were constructed. It should here be mentioned that the managers of the various canals in the Midland area were most helpful, and in some cases they paid visits to the school.

The chief goods carried by the barges were found to be (i) fuel (oil and coal); (ii) food stuffs (wheat, cocoa, sugar); (iii) raw materials (copper, spelter, pig iron, pig lead); (iv) manufactured goods (chiefly iron goods).

The total tonnage of each type of commodity was calculated and graphs were prepared for the purposes of illustration and comparison between the different products.

##### 5. A REGIONAL SURVEY

One of the outstanding exhibits shown at Stafford was the maps and folios made in connection with a Regional Survey. This survey is being carried out by a Selective Central School in the south of the County. The children attending the school are selected from eighteen contributory schools over an area of approximately twenty square miles. This area coincides very closely with the old ecclesiastical parish, and this unit was therefore chosen for the survey.

Unfortunately the boundaries of the area could not be contained on one of the O.S. 6-inch quarter sheets, and nine such maps were found to be necessary, although large portions of eight of these maps were

outside the area. To overcome the inconvenience of using so many maps and to reduce the ultimate cost, a special map was prepared for the school by the Ordnance Survey Department, Southampton. This map is approximately 24 inches by 20 inches and is printed on imperial-size paper in grey. This colour gives an artistic effect, and while being quite distinct for identification of sites, does not show up conspicuously on maps coloured for special purposes.

The first work connected with the survey was the preparation of a Land Utilization Map. This map is corrected and renewed yearly and forms an important basis for further work.

Those responsible for the survey had then to decide on some definite scheme for the classification of material collected by the scholars, and the following gives some idea of the method adopted.

The main divisions were :—

o. General; 1. Structure and Climate; 2. Economic—Coal and Iron; 3. Economic—Clay and Glass; 4. Economic—Miscellaneous; 5. Social; 6. Historical; 7. Important Personalities; 8. Outliers; 9. Miscellaneous.

Each of these divisions was divided into ten sections, 00, 01, 02, 03, 04, 05, 06, 07, 08, 09; and finally each section was divided into ten further parts.

Probably the full particulars of two sections will make this indexing more clear.

(i) o. General—was divided into :—

- 00. Geographical Position.
- 01. Old Maps.
- 02. Models and Block Diagrams.
- 03. Panoramas and Aerial Views.
- 04. Views.
- 05. Utilization of the Land.
- 06. Bibliography.
- 07. Index Maps.
- 08. Summaries.
- 09. Miscellaneous.

(ii) Then taking 00, Geographical Position, as the first example, we have:—

000. The South Staffordshire Plateau—an account of.
001. The South Staffordshire Plateau—map of.
002. The South Staffordshire Plateau—diagram of.
003. The Dudley Plateau—account of.
004. The Dudley Plateau—map of.
005. The Dudley Plateau—diagram of.
006. Brierley Hill and District—account of.
007. Brierley Hill and District—map of.
008. Brierley Hill—plan of Toposcope outside School.
009. The Area of Survey—map.

(iii) i. Structure and Climate is also divided into ten sections: 10, 11, 12, 13, 14, 15, 16, 17, 18, 19. Taking 11 as a second example, we have:—

### *11. Geology of the Midlands.*

110. The Rocks of the Midlands—account of.
111. The Building of the Midlands—a series of maps.
112. Lapworth's Geological Map, of the Midlands.
113. The South Staffordshire Coalfield—account of.
114. Building of the Coalfield—The Carboniferous Province.
115. Building of the Coalfield—South Midland Basin.
116. Building of the Coalfield—General—and maps.
117. The Triassic Rocks—account of, and maps, and diagrams.
118. The Ridge and the Severn Valley—Map and transparency.
119. The Ridge and the Severn Valley—Sections and transparency.

It might be added that in each section 09, 19, etc., are reserved for miscellaneous matter which cannot otherwise be classified appropriately.

The material is collected from every available source, but the actual work of the children is generally far more interesting. They are supplied with duplicated sheets entitled "What to look for" on particular aspects, and these are completed after observation and

consultation with the members of their families. The oldest relative is here frequently the source of almost forgotten facts.

It should be noted, however, that this information has to be checked and carefully verified by the teachers, otherwise small errors and inaccuracies creep in and prove a great drawback in the preparation of the summaries.

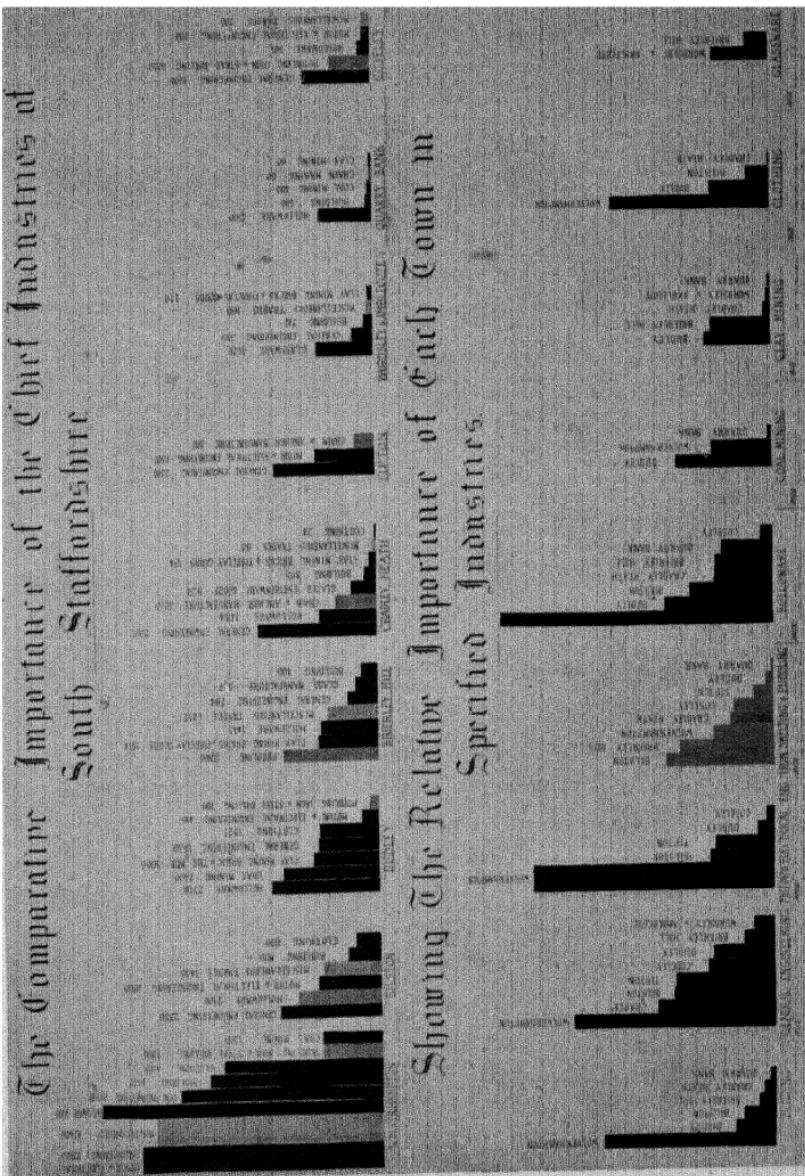
Such a survey requires a tremendous expenditure of time. It is necessarily a work of years and not of months. It must not be hurried, but material should be collected at all times and indexed immediately for further examination.

## 6. INDUSTRIES AND OCCUPATIONS OF STAFFORDSHIRE

Many schools in Staffordshire make a study of its industries and occupations as part of their scheme of Geography teaching. Local Geography is studied throughout the course and so far as possible it is linked with World Geography. Thus a school studying *North and South America*, in the first year, makes a special study of the goods that Staffordshire sends to and obtains from these continents. In the second year pupils who are taking *Africa, Asia and Australia* as their "special regions" link their local Geography with portions of the British Empire selected from this region.

For the purpose of the Exhibition certain schools made a more detailed survey of the County. In this way the whole of Staffordshire was covered under the following headings :—

1. Industries and occupations.
2. Number of people employed in each.
3. Relative importance of each town in specified industries.



4. Comparative importance of industries in different areas.

5. The manufactured products exported, showing ports of dispatch and world destinations.

The industries and occupations were classified under headings, each group including allied industries. To each group a specific colour was assigned. These colours were used (*a*) to build up a special map of Staffordshire showing location of industries, and (*b*) for making columns of the distinctive colours indicating the industries, and (*c*) for making comparative graphs.

The information required for these studies was obtained in a variety of ways, the chief of which are given below :—

1. Local Employment Exchange for (*a*) list of firms ; (*b*) list of industries ; (*c*) numbers employed in specific trades.

The managers of the Employment Exchanges were, with one exception, most helpful.

2. Official handbooks of the various towns.

3. Trade and district officials and officials of trade and industrial organizations.

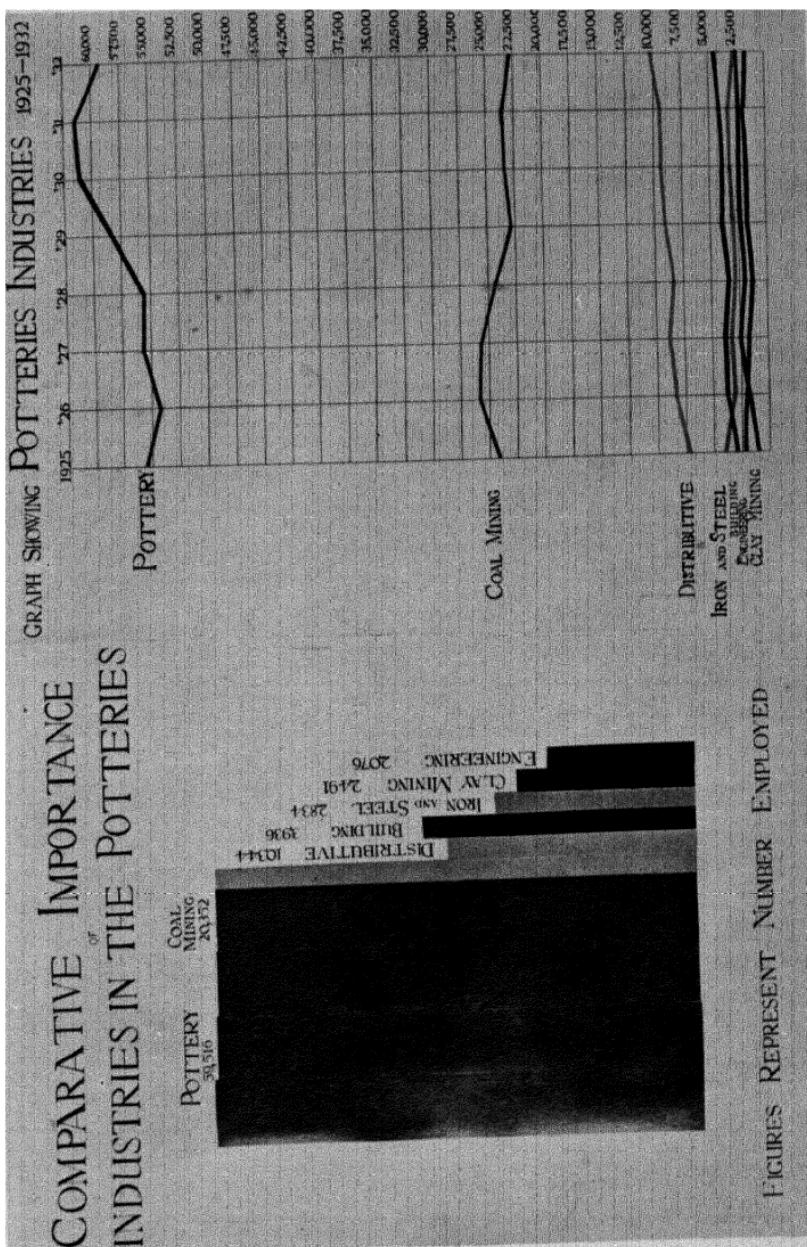
4. Heads of firms for information regarding (*a*) processes ; (*b*) raw materials ; (*c*) destination of products ; (*d*) loan of specimens for the Exhibition.

5. Board of Trade Journals and specific trade journals.

6. Public Libraries for reference books and trade directories.

7. Parents of children supplied much useful information regarding local industries and occupations.

8. Visits to works and factories : notes were made on each visit, and in nearly all cases these notes were checked by the firms concerned.



### 7. WORLD PRODUCTS SECTION

This section was prepared by a senior mixed school. The method was to take the natural regions of the world and study the products peculiar to each region. This left some compound products made up of natural products from different regions, e.g. soap.

The actual materials consisted of maps, tableaux, pictures of manufacturing processes, descriptive booklets, and samples of raw, intermediate and finished products.

Eight large coloured maps were used to show the natural regions: one map contained all the regions and each of the others dealt with one individual region, the particular region concerned being coloured and the remainder of the world left blank. Each regional map was hung on the wall immediately behind its respective products which were displayed on a long table. In addition to the maps already mentioned there were others showing the chief petroleum and mineral producing areas. Each region was represented by a tableau picturing a typical scene.

Pictures were also used to illustrate the various processes from the raw product to the finished article and descriptive booklets were on view in their appropriate positions.

Many firms, with world-wide connections, co-operated in the work connected with this exhibit, and in no case was co-operation refused.

### 8. THE DEVELOPMENT OF WORLD TRANSPORT

The aim of this exhibit was to show, by means of maps and models, how, where and why transport has developed, and how Geographical conditions have influenced the development. The exhibit was so

staged as to show clearly the development that has taken place in land and water transport in each continent.

Upon the maps were shown the physical features, roads, railways and water and air-routes. The models used in each continental section were connected to maps showing their location.

Model animals were obtained from local stores, while carts, waggons, ships and trains were made in the metal and woodwork centre attached to the school. Human transport was depicted by small wax figures illustrating this form of transport in such regions as Central Africa and parts of China. These models were made by pupils who were studying Africa and Asia in the second year of their course.

Methods of road transport were illustrated by models of sledges, bullock waggons, lorries, and waggons of the "prairie schooner" and veldt type. Various forms of rail transport were illustrated in a similar way.

Models showing water transport ranged from primitive dug-outs, kayaks, Indian birch-bark canoes, inflated rafts, and the reed boats of Lake Titicaca to modern steamers. Model aeroplanes of various types were associated with the main world air-routes.

Another exhibit, staged by a progressive junior school, showed the development of transport from the time of Columbus to the present day. This was an exceptionally clever piece of work in which teachers and children had co-operated.

#### 9. THE DEVELOPMENT OF LOCAL TRANSPORT

This exhibit, comprising maps, diagrams, models and pictures, showed the development of transport in the Potteries from 1755 onwards.

At first, pottery was either hawked about the

district by potters themselves or by *higgler*s who carried it from village to village. Later, with the progress of the industry, flints were brought from South-East England and china clay from Cornwall. The former came by sea to Hull and thence up the Trent; the latter either by sea to Liverpool, whence it was trans-shipped to boats ascending the Weaver, or by boats ascending the Severn to Bridgnorth or Bewdley. From these points it was carried by pack-horse or wagon to the Potteries: the waggons on their outward journey to the Severn were loaded with pottery, and on their return journey carried groceries in addition to their load of clay. The cost of this form of land transport worked out at 1s. per ton per mile, or about £3 per ton per journey.

Later the famous potter Wedgwood was largely instrumental in the development of canals, the first in this district being opened in 1777. The coming of the canals cheapened transport, for one ton of goods could be conveyed to Liverpool by canal at a cost of 13s. 4d. while the cost by road was £2 10s. The construction of canals altered the whole outlook of the pottery industry: new works were opened up, new roads constructed, and population increased with great rapidity.

From the middle of the nineteenth century rail transport developed rapidly in the Pottery area, and there was a corresponding diminution in road transport except for short distances. Before the coming of the railways the Potteries were a five-day journey from London, to-day the time taken by rail is only about three hours. The introduction of the motor revitalized road transport: canals declined somewhat in importance, railways were hard hit, and horse transport entirely disappeared, while Manchester, Liverpool and Birmingham were brought within a few hours' road journey of the Potteries.

## IO. THE HOUSEHOLD GEOGRAPHY SECTION

All visitors were charmed with this section, and the majority were frankly amazed at the way in which the essential facts of the more domestic side of modern life were illustrated. To the senior girls' schools of Staffordshire belongs the credit, for they were entirely responsible for its staging. The aim was to show how Geography could be taught to girls by taking the home and home life as the central feature.

One section dealt with the Geography of food, including beverages and cereals. In one group four tables were laid for breakfast, dinner, tea and supper, and each product on the tables was linked to its source of origin on world maps.

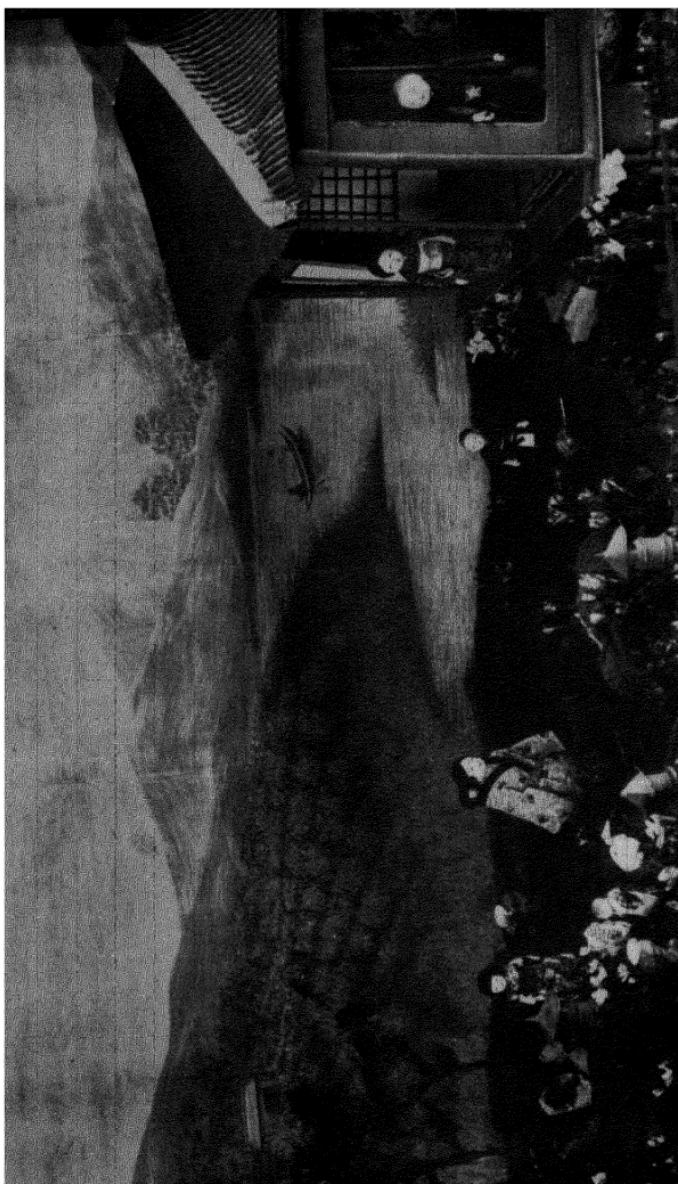
Other exhibits illustrated the Geography of the Kitchen, Bedroom and Sitting Room. Here were maps, diagrams and pictures illustrating various points about the respective rooms; there were models of a grain elevator and a coal mine. The latter model was part of a group devoted to a study of fuel in which coal, gas, electricity, and petroleum were dealt with in turn.

A comprehensive display of posters formed another exhibit, and in all cases the work was accompanied by pupils' note-books, charts, maps, diagrams and pictorial records.

## II. JAPAN: A JUNIOR SCHOOL PROJECT

All subjects do not lend themselves to the "project method" of treatment, and it is necessary to make a careful choice, for, as the name implies, the "project" method should branch out into as many pathways of knowledge as possible.

*Japan* was a school, and not a class project, and the work in connection with it was carried on with the rest of the year's work in World Geography.



MODEL OF JAPANESE HOUSE AND GARDEN

The actual study of Japan was left until sufficient information had been obtained to permit of dealing fully with the life of the country.

Teachers and pupils during the early part of the year made collections of pictures; cuttings from papers; story-books about Japan; and of Japanese articles. "Little Mitsu of Japan" was chosen as a centre of interest, and from this centre, by arrangement and use of pictures, poems, models, etc., the interest widened into various channels. Geography, History, Literature, Nature Study and Handwork were all used as a means of gaining a wider knowledge of Japan and Japanese life.

Each member of the staff specialized in one particular branch of study, preparing maps, posters and charts for class teaching, or packets and models for individual work, on the completion of which the children "lived" in Japan for some time.

Through a study of maps and pictures they made the journey to Mitsu's home; learned much of her life from the model of a Japanese house and garden, and visited the beauty spots and places of interest by means of pictures and coloured posters. From photographs of Tokyo, for instance, they obtained a good idea of the shops and the lives led by the workers in the capital. The children also read Japanese poems that had been translated into English, and revelled in stories about little Japanese folk; they wore Japanese clothes, made various objects that lent themselves to handwork, and thus through these varying ways gained a wide knowledge of "The Land of the Rising Sun."

This treatment was specially amplified for the Exhibition in order to show how the "project" method widens a child's outlook: the various aspects made it clear how the subject (Mitsu) became the starting point for various channels of information.

## 12. THE VALUE OF BROADCAST LESSONS IN GEOGRAPHY TEACHING

Some thirty schools in the County area of Staffordshire "listen-in" to Geography talks, and the exhibits on view from a number of these schools were interesting as revealing two methods of using these lessons.

Five schools only have planned their Geography schemes to cover the ground of the B.B.C. lectures. The experience of one school adopting this method is outlined here. The Easter term was chosen, and the regions dealt with in the talks were Russia, Germany, Poland, Czechoslovakia, Hungary and Yugoslavia. The teachers made a study of the countries, while the boys consulted their regional geographies, atlases, library books and newspapers. The school is situated in a mining area and only six members had a wireless set in their homes. Some boys found it difficult to follow the talks, and this fact appeared to be due not to the set, which was an excellent one, but to lack of experience in listening to wireless.

The boys made rough notes during the talks, and after discussion expanded these notes into more permanent records which they illustrated by pictures, maps and diagrams.

The above method was not, however, used in the majority of schools, who regarded the talks as of general interest, rather than as basic parts of the curriculum in Geography, and as such they agreed that the talks had a definite value.

The general impression of teachers using either method was that speakers, in nearly all cases, gave vivid descriptions of the countries they were describing.

### 13. A METHOD OF TEACHING GEOGRAPHY TO BACKWARD CHILDREN

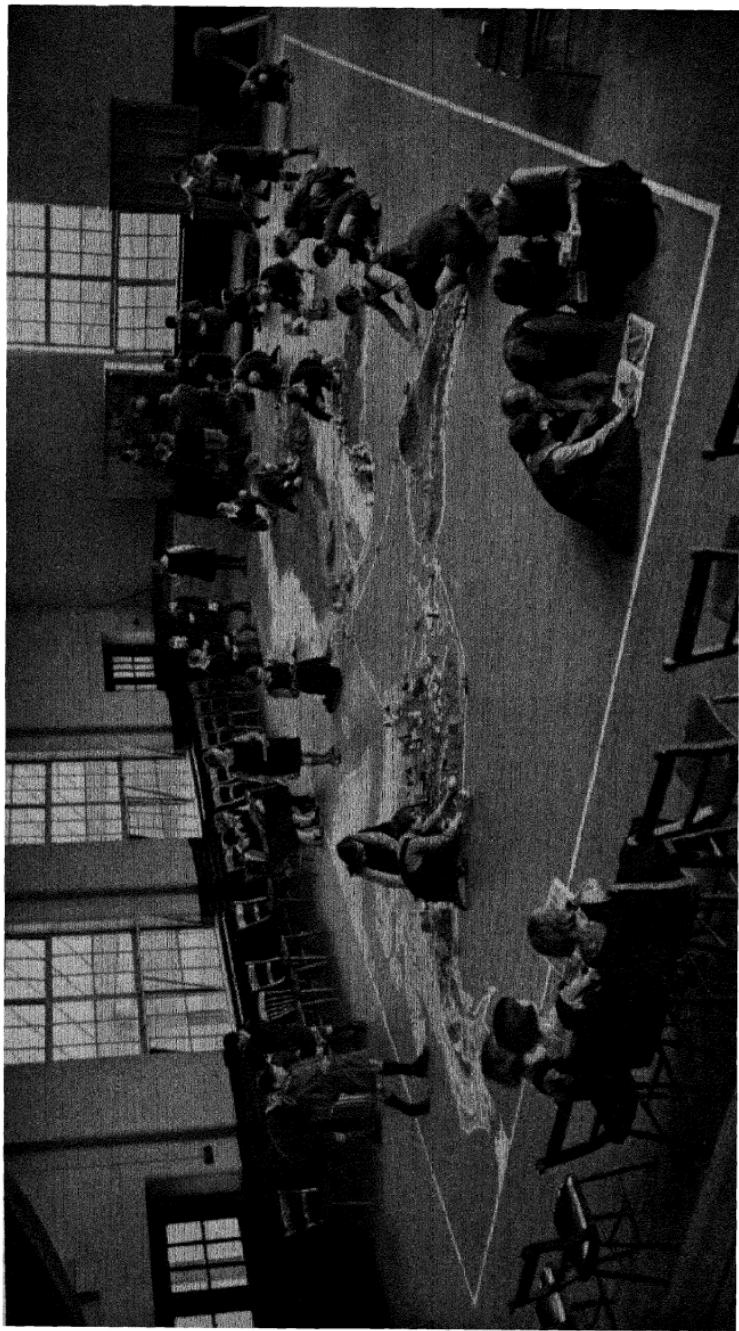
Photos and careful notes on an original method of teaching Geography to slower children proved of much interest to teachers engaged in this type of work.

The method, as worked in the school concerned, is a purely practical one: it has already proved of definite value to those children who find it difficult to read a text-book.

The apparatus needs very little outlay. In this case a map of the world 40 feet by 24 feet was painted on the floor of the school hall. It is drawn on Mercator's projection and is painted in heavy white outline.

The materials used in conjunction with the map consist of models made by the children in handicraft periods, collections of labels, tins, etc., a supply of sand and white chalk, and pictures pasted on card-board and mounted on small base boards so that they will stand upright on the floor. The models take the form of small made-up scenes representative of life and scenery in different parts of the world, such as a timber sledge and a lumberjack's cabin, camels, palm trees and flat-roofed houses representing an oasis. The boxes and labels, etc., can be easily procured from home. They consist of empty date boxes, tea packets, tobacco packets, orange labels and similar material. In addition, small samples representing various commodities have been collected for wheat, maize, rice, tea, cotton, rubber and similar products. Model ships laden with appropriate commodities travel to and fro across the oceans.

Names of important towns have been painted on large circular discs, and these discs—fixed to the map



A SCHOOL HALL; SHOWING THE USE OF THE WORLD MAP FOR BACKWARD CHILDREN

by a drawing-pin—are placed in position by the children. The trade routes by land, sea and air are shown by coloured tapes.

The relief is shown by piling sand on the map: river systems are cut out in cardboard, and each system is made an independent unit. Vegetation is indicated by cut raffia or by small models of trees, etc.

The use of the map can best be illustrated by taking an example. Let us suppose the subject is the Mississippi basin. A general account of the area is first given, and then the children make their own notes as to the apparatus required. The class is then divided into sections for the map work. One section is responsible for the relief, another for setting out the vegetation belts, another for the products, and others for the towns, railways and routes.

At the ports the trade section stacks up its imports and exports, and finally the shipping section lays down its tapes along the steamship routes, and when the steamers are loaded guide them to their destination.

After this the class discuss the work they have done on the map, which now lies completed before their eyes.

There is no doubt that this scheme trains the child through his eyes and hands, for what he does on the map he usually remembers. A real human interest is also created in the pupils by the actual handling of the commodities and their association with the sources of production.

#### 14. SCHOOL JOURNEYS AND CAMPS

An exhibit staged at the entrance to the main hall illustrated work done in connection with school journeys and camps. The following list shows a part

only of the work done by this enterprising school, but it serves to indicate the wide ranges that can be covered if the work is spread over a number of years.

1. Prismatic compass and chain surveys for maps of local farms, etc.
2. Measurements of churches and other buildings with home-made instruments, and (in the winter) constructing scale models of the same.
3. Diaries about camp life.
4. Contour maps of camp district for study while in camp.

A particularly interesting group in this series was a description of a trip from the Black Country to Chester by canal barge.

#### 15. SOURCES OF SUPPLY OF FILMS AND SLIDES

The following lists of films and slides was compiled for the Exhibition by a Geography Master in a Staffordshire School. In each case the source of supply is given, and all the films and slides mentioned have been exhibited in the school over a number of years.

##### *Films*

The following films are loaned free. Adequate notice of required dates should be given. As films are easily damaged, the borrower is usually asked to hold himself responsible for any damage done while films are in his possession. In some cases films are loaned only if a competent operator and up-to-date apparatus are available.

Three sizes of films are in use: 35 mm. (A), 16 mm. (B), and 9·5 mm. (C).

Name and address of Company.	Size of films.	Remarks on films.
Educational Films Bureau, 46, Brewer St., W.1.	A.	
Canadian Pacific Railway, 62-65, Charing Cross, S.W.1.	A.	Agriculture, industries, scenery and sport in Canada.
Dept. of Immigration and Colonization, Canada House, Trafalgar Sq., S.W.1.	A.	—
Director, Publicity Bureau, South Africa House, 73, Strand, W.C.2.	A.	Life, scenery and industries of South Africa.
Paris, Lyons & Mediterranean Rly., 179, Piccadilly, W.1.	A.	“Route des Alpes.” (15 mins.) “Les Baux.” (10 mins.)
Imperial Airways Ltd., Airway Terminus, Victoria Station, S.W.1.	A.	Croydon to Paris.
Cunard Steamship Co., Cunard Building, Liverpool.	A. B.	India, Ceylon, Egypt, Mediterranean, New York, etc. Comprehensive library of films showing life, industries, products and scenery in all parts of the British Empire.
Community Services Ltd., 1, Montague St., W.C.1.	A.	New Zealand, Germany, Switzerland, South America, West Indies, Japan. (5s. per reel. Some free.)
Commission on Educational and Cultural Films, 15, Taviton St., W.C.1.		Does not supply films but will willingly give advice and information regarding films

*Slides*

The following slides are loaned free. Adequate notice of required dates should be given. Address

enquiries to Publicity Dept. unless otherwise stated. Return carriage only is to be paid except where stated. N. = Notes supplied.

Name and address of Company.	Remarks on slides.
L.M. & S. Railway, Euston Station, London, N.W.1.	Carriage free. 31 sets. British Isles. Lecture notes supplied.
L.N.E. Railway, 26, Pancras Rd., N.W.1.	Carriage free. 17 sets. England, Scotland, Belgium, Switzerland, Italy. N.
G.W. Railway, Paddington Station, W.2.	Carriage free. 20 sets. England and Wales. N.
Southern Railway, Advertising Dept., Waterloo Station, S.E.1.	10 sets. South Coast, Continent. Carriage free. N.
Paris, Lyons & Mediterranean Railway, 179, Piccadilly, W.1.	France, Morocco, Corsica. Continental size. Carrier lent.
Belgian National Railways, 47, Cannon St., E.C.4.	Chief cities and places of interest in Belgium.
German Railways, Information Bureau, 9, Queen's Gardens, W.2.	Scenery and Industries. Continental size. 10s. Deposit (returnable). Carriage both ways.
Swiss Federal Railways, 11b, Regent St., S.W.1.	Geography of Switzerland. Deposit 1s. per slide.
United States Lines, 14, Regent St., S.W.1.	Chief cities of Eastern and Western States.
London's Underground, 55, Broadway, Westminster, London, S.W.1.	7 sets. Buildings of interest in London.
Canadian Pacific Railway, 62-65, Charing Cross, S.W.1.	6 sets. Mostly travel in Canada.
Royal Mail Steam Packet Co., Leadenhall St., E.C.3.	S. America, W. Indies, Norway, Iceland, Mediterranean.
Cunard Steamship Co., Cunard Building, Liverpool.	3 sets. History of shipping. N.
Union Castle Steamship Co., 32, Paradise St., Birmingham.	1 set. Tour round Africa.
P. & O. Steam Navigation Co., 122, Leadenhall St., E.C.3.	Mediterranean, India, China, Japan, Norway and the Baltic.
Booth Steamship Co., 11, Adelphi Terrace, Strand, W.C.2.	"1000 miles up the Amazon."

Name and address of Company,	* Remarks on slides.
White Star Lines, 30, James St., Liverpool. Port of London Authority, E.C.3.	"The New World for a Holiday." History of development of Port. N. General survey of Tasmania.
Agent-General for Tasmania, Australia House, Strand, W.C.2. Victoria League, 81, Cromwell Rd., S.W.7..	Scenery and industries of British Empire. Affiliation fee 1s. per year. 8 sets. Canadian scenery and industries. Coloured. N.
Canadian Government Exhibition Building, Blackburn Rd., West Hampstead, N.W.6.	Technical, European and Eastern aerial views.
Imperial Airways Ltd., Airway Terminus, Victoria Station, S.W.1.	Early history, scenery and industries of Canada. N.
Department of Immigration and Colonization, Canada House, Trafalgar Square, S.W.1.	30 sets. Comprehensive survey of life and scenery of South Africa.
Director, Publicity Bureau, South Africa House, Trafalgar Square, W.C.2.	5 sets. Cocoa, Bournville, Transport. N.
Cadbury Bros., Ltd., Lecture Bureau, Bournville, Birmingham.	

## APPENDIX

ACCOUNT OF THE EXHIBITION, FROM THE *Birmingham Post*,  
JULY 14, 1933

THE Staffordshire Geographical Exhibition, which was opened at the County Technical College, Stafford, yesterday and remains open to the general public until Tuesday evening, is a notable example of the humanizing spirit in modern education. Even the speculations of Aristotle or Strabo's pioneer work in political geography before the Christian era had in them more of human interest than the loathly array of place-names and products and census figures that children thirty years ago had to take by assault while their eyes wandered over vividly-coloured maps on which caterpillar mountain ranges turned the thoughts towards cabbages, if not kings. One could always readily recall in those days that Northampton had some association with leather, since the teacher usually carried a sample of the material as an unfailing mnemonic in the best Dotheboys tradition.

### POOLING IDEAS

Happily, as the Stafford exhibition abundantly proves, those days are gone for good; and, for the child, the study of geography has been made, in a way, as exciting an adventure as befell, in the golden age of discovery, those conquistadores who, coming upon new lands, gazed at each other with a wild surmise. This exhibition has been arranged by the local Education Authority in conjunction with education inspectors to show the progress that is being made in the teaching of geography in Staffordshire. It aims, moreover, not only at displaying the work of teachers, but at pooling ideas, so that freshness of outlook on the subject may be obtained. In all the exhibits, obviously the underlying principle guiding the teachers has been the need to use scientific geography as an explanation of man's relation to his environment, and to show

how the subject can be made as interesting as possible to the pupils. The organizers, amongst whom the leading spirit has been Mr. J. H. Stembridge, one of H.M. Inspectors of Schools, have attempted to trace the development of the subject—from the infant school to the university, and to that end they have secured the active co-operation of the University of Birmingham, the North Staffordshire Technical College, the Dudley Training College, the secondary schools and public elementary schools of all types in the county, and the Werrington Home Office School.

#### ENGENDERING ENTHUSIASM

It is easy to understand, after an inspection of the exhibits, how the enthusiasm of the children is engaged in the subject by the use, for instance, of friezes of children of many lands, of dolls dressed correctly in the costumes of every nation, the dressmaking being the work of the young people themselves, or by models of "our school" and "our village." The scholars know all about the flora and fauna of their own county, because the wild flowers of the district are gathered and named and displayed, and friezes in the classroom illustrate the bird life and animal life of the neighbourhood. Without using the fearsome word "ecology," the teachers illustrate for their charges the mutual relations of organisms and their environment; the distribution of the county's industries and the nature of them are plotted and mapped so that the eye in a few minutes carries to the mind more information than an hour's poring over text-books. Then, as they advance to wider considerations of economic geography, or learn how geologic structure determines the nature of the soil, or how climatic variations and humidity affect vegetation, the scholars, as this exhibition most interestingly proves, see actual samples of world products related by streamers to charts showing the places of their provenance; or gaze enchanted on some fossil tree recovered from the coal measures, and see how meteorology may come to man's aid. Some of the models arranged in the County Technical College, notably "Japan," a senior project, and "Palestine," display an amazing ingenuity in giving definition and reality to hazy general notions. The University of Birmingham contributes a very revealing geological model of part of Worcestershire, taking in country that is familiar to Birmingham people, and also some regional surveys. There is no royal road to learning,

it is true, but this exhibition indicates a pleasurable road, and one that has evidently been traversed by teachers and pupils in no perfunctory or otiose spirit.

### A TRIBUTE TO THE TEACHERS

The opening ceremony yesterday was performed by Mr. E. G. Savage, Chief Inspector for Technical Education, who was deputizing for Sir Henry M. Richards, Senior Chief Inspector of Schools. Sir Henry was not well enough to travel. He is retiring from his position in September, and is to be succeeded by Mr. Savage, who has had experience of his work in Egypt and America as well as at home.

Mr. Savage reminded his audience of the "ubiquity" of the subject of geography, for which one distinguished geographer, the story goes, claimed that it even included religion. There was to-day no possible doubt as to the importance of the subject in the schoolroom, but it did suffer, of course, from the fact that it had so many sides. The main thing was not merely to interest the children, but to stimulate their interest. The exhibition would show the world outside the teaching profession what teachers were doing, how they were thinking and working out their own salvation; and that was an object lesson which the teaching profession should from time to time present to a generally rather critical and hard-hearted world.

A vote of thanks was accorded to Mr. Savage on the motion of Mr. F. A. Hughes, Director of Education for Staffordshire, seconded by Mr. I. Badger, secretary of the Staffordshire County Teachers' Association; and the chairman, Alderman Julian Whitehouse, chairman of the Staffordshire Education Committee, was thanked for his active interest in the exhibition by Mr. E. H. Carter (H.M. Inspector) and Dr. C. F. Smith (H.M. Divisional Inspector).













